

From boatanchors@theporch.com Thu Jan 19 09:32:29 1995  
 Date: Thu, 19 Jan 1995 07:22:26 -0600  
 Message-Id: <"Macintosh \*/PRMD=MOT/ADMD=MOT/C=US/"@MHS>  
 From: Scott\_Johnson-AZAX60@email.sps.mot.com  
 Subject: RE>807 ratings

Reply to: RE>807 ratings

I would assume that in the AB1 and class B cases, they are refering to audio (i.e. modulator) duty.

	PLATE	SCREEN	GRID	OUTPUT	
C-T	750V 50W	100mA CW	250V	6mA	-45V 3.5mA
C-P	600	100	275	6.5	-90 4 42.5 Phone
AB1	750	15/70	275	3/8	-35 72 two tubes?
B	750	15/240		0	120 two tubes

A quick calculation yields:

	DC PLATE INPUT	DC SCREEN INPUT	PLATE DISSIPATION DC PWR - RF?
C-T	75W	15W	25W
C-P	60	17.8	17.5
AB1	11.5/52.5	8.3/22	??????????
B	11.5/180		60

The class AB1 numbers suggest that they couldn't decide whether to talk about two tubes or one. The 6146 numbers are more like the class B numbers.

Considering the source and the results, the 1971 RAH is talking ICAS.

Why am I doing this? I am supposed to be debugging a Unix SCSI driver problem wherein I cannot read/write ANSI tapes on a 9 track tape drive and I'm driving myself crazy.

Richard Loken VE6BSV, Systems Programmer - VMS : "...underneath those  
 Athabasca University : tuques we wear, our heads  
 Athabasca, Alberta Canada : are naked!"  
 \*\* tech@cs.athabascau.ca \*\* : - Aurthor Black

From boatanchors@theporch.com Thu Jan 19 02:44:56 1995  
 Date: Thu, 19 Jan 1995 00:29:25 -0600  
 Message-Id: <9501190628.AA00924@texan.frco.com>  
 From: bill@texan.frco.com (William Hawkins)

Subject: Re: 807 ratings (actually, why?)

Richard Loken, with the distinctive .sig, asks, "Why am I doing this?" followed by a statement about his real job driving him crazy. I can identify with that. My group was involved in a merger two years ago, where a completely different corporate culture took over. Work is very frustrating. Boatanchors, on the other hand, is never frustrating. If someone has a problem and I can't help, I wait to see what happens (or what Bob has to say). If I think I can help, I do, and that is usually rewarding. I say "usually" because this is a diverse forum. It's not often that you get a "thank you" reply, but they really make it all worthwhile.

It is also true that boatanchors are from an era where you could understand what was going on electronically. Amplifying elements are visible to the naked eye (and warm, too). Because the components are discrete, there's a good chance that a problem can be solved to bring a piece of gear back to what it's designer intended. Solving problems is a very good feeling - something that's getting pretty rare these days.

So, thank you, boatanchor people, for providing interesting discussions about solvable things (with the possible exception of grounding). You get me through the day. And Richard, I think that's why we do this.

Bill Hawkins

From boatanchors@theporch.com Thu Jan 19 09:52:27 1995  
Date: Thu, 19 Jan 1995 07:36:10 -0600  
Message-Id: <9501190723.aa20861@jackatak.theporch.com>  
From: listown@jackatak.theporch.com (List Admin/Owner BoatAnchor Mail List)  
Subject: A New Policy for the List...

BOATANCHORS Mail List

Thu 19 January 1995

FORUM ON OLD RADIOS, FIRE BOTTLE TECHNOLOGY, AND ANCIENT ELECTRONIC ARTS  
Jack Hill, W4PPT, List Janitor

\*\*\*\*\*  
\* NEW POLICY NOTE:  
\* Due to the incredible volume of bouncing mail, I am going to have  
\* to start removing addresses from the list that cause ongoing  
\* problems. In particular, if your mailbox is full or your account  
\* over quota, and this results in bounced mail, mail to your address  
\* WILL be set to "postpone" after a few days.

\*  
 \* If you use a 'vacation' program, please be sure that it only  
 \* sends a automated reply to listproc \*once\*. If I get more than  
 \* one, then I'll delete your address from the list.  
 \*\*\*\*\*  
 --  
 73  
 Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657/#1789 -- both all mobile! ;^)  
 \* - - - BoatAnchor Mailing List Owner - - - \*  
 | Jack GF Hill |Voice: (615) 459-2636| Ham Call: W4PPT |  
 \* P. O. Box 1685 |Modem: (615) 377-5980| Bicycling and SCUBA Diving \*  
 | Brentwood, TN 37024|Fax: (615) 459-0038| Life Member - ARRL |  
 \* listown@jackatak.theporch.com-"Plus ca change, plus c'est la meme chose" \*

From boatanchors@theporch.com Thu Jan 19 19:57:37 1995  
 Date: Thu, 19 Jan 1995 17:50:03 -0600  
 Message-Id: <9501191920.AA11234@wrdis01.robins.af.mil>  
 From: lakeith@wrdis01.robins.af.mil (Larry Keith )  
 Subject: Airplanes and Radios?

I am going to a meeting, tomorrow, with the President of my ham radio club (Middle Georgia Radio Assn) and the curator of the Georgia Museum of Aviation.. The museum is located here at Robins AFB and has about 85 aircraft on display and a lot of interesting exhibits. The meeting is to explore some ways that the club and the museum can help each other. For instance, they want us to conduct the next Young Astronaut seminars and concentrate on SAREX and things like that.. And, one of the things on the agenda is discussion of enhancements to displays or new displays about Air Force communications. So far, my brainstorming has produced the following ideas..

1. USAF MARS
2. Aircraft radios (from balloons to the B-2..)
3. A Morse Intercept mockup (wonderful setting for some SP-600s and R-390A's)
4. Putting the existing BC-610's and BC-348 on the air..
5. Somewhere there should be a KWM-2A..
6. Survival radios..
7. Military telegraph keys... especially Air Force related ones!
8. Got to have some Tech Orders laying around..

9. Don't forget the test equipment..

Anyhow, since I am not an Air Force Comm guy, I would appreciate any ideas or suggestions. If you, as a boatanchor type, came to the museum, what would you like to see?

73,

Larry Keith, KQ4BY  
lakeith@robins.af.mil

From boatanchors@theporch.com Thu Jan 19 20:46:26 1995  
Date: Thu, 19 Jan 1995 18:49:01 -0600  
Message-Id: <Pine.3.05.9501191934.A20592-b1000000@booz.bah.com>  
From: JD Delancy <k1zat@bah.com>  
Subject: Re: Airplanes and Radios?

Larry, sounds interesting.

On Thu, 19 Jan 1995, Larry Keith wrote:

> 1. USAF MARS

AF MARS was big on Collins KWM-2's, 30L1's, 312B4's, S-lines and 30S1's. This would be a good place to combine MARS and your number 5 below.

> 3. A Morse Intercept mockup (wonderful setting for some SP-600s and  
> R-390A's)

A pair of CY-597 racks with a pair of R-390's in each would be fairly close. Between the two racks is a "position" where the MC-88 typewriter sits (later replaced with a mod37 teletype).

You might also consider some of the early morse uses, like in Alaska on the ACS (Alaska Comm System) where Morse was king.

A pair of cans that the early operators used would be a nice touch.

> 4. Putting the existing BC-610's and BC-348 on the air..

Maybe, if you could find one, mating the 610 and 348 with a Model-15 or 19 teletype for a Radio Teletype on the air demo.

> 5. Somewhere there should be a KWM-2A..

> Anyhow, since I am not an Air Force Comm guy, I would appreciate any  
> ideas or suggestions. If you, as a boatanchor type, came to the

> museum, what would you like to see?

I would, you betcha!

> 73,

jd

From boatanchors@theporch.com Thu Jan 19 12:57:46 1995  
Date: Thu, 19 Jan 1995 10:13:44 -0600  
Message-Id: <m0rUzUf-000uHXC@twisto.eng.hou.compaq.com>  
From: David=Douglas%Sys=Mgmt%Sys=Hou@bangate.compaq.com  
Subject: ARRL petitions ITU to drop code

Forwarded message:

Subj: ARRL Petitions ITU To Drop Code  
Date: 95-01-18 19:35:11 EST  
>From: KB5WIX  
To: KB5WIX

Subj: ARLX004 ARRL Petitions ITU To Drop Code Requirements  
Date: 95-01-18 04:36:18 EST  
>From: w1aw@arrl.org  
To: QST@arrl.org

>From: w1aw@arrl.org  
Sender: owner-w1aw-list@netcom.com  
To: QST@arrl.org

SB SPCL @ ARL \$ARLX003  
ARLX004 ARRL To Petition ITU To Drop Code Requirements

ZCZC AX72  
QST de W1AW  
Special Bulletin 4 ARLX004  
>From ARRL Headquarters  
Newington CT January 17, 1995  
To all radio amateurs

SB SPCL ARL ARLX004  
ARRL To Petition ITU To Drop Code Requirements

In a formal petition announced today by ARRL International Affairs Vice President Larry Price, W4RA, the ARRL has requested that the ITU drop all Morse code requirements for licensing of amateurs in the United States. Citing the number of newly licensed Technician class amateurs (for which the Morse code elements are not required), and based on extensive feedback from five recent

surveys, it is apparent that the code requirements have become "a substantial hinderance to the furtherance of the craft". Though the next scheduled meetings of the ITU board is not until February, 1996, the ARRL has committed to laying the groundwork for the radical change as soon as possible.

When questioned about the proposed change, Michael Covey, Assistant Director of the Federal Communications Commission, said that he was surprised that the request was so long in coming. Though he stopped short of giving official FCC endorsement for the proposed change, it was obvious from his comments that the FCC would probably not interfere with the process.

Additional details, along with the full text of the proposal, will be forthcoming in the next two weeks.

/EX

----- Headers -----  
>From owner-wlaw-list@netcom.com Wed Jan 18 04:31:20 1995  
Received: from mail.netcom.com by mailgate.prod.aol.net with ESMTP  
(1.37.109.11/16.2) id AA112171480; Wed, 18 Jan 1995 04:31:20 -0500  
Return-Path: <owner-wlaw-list@netcom.com>  
Received: by mail.netcom.com (8.6.9/Netcom)  
id OAA01769; Tue, 17 Jan 1995 14:34:58 -0800  
Received: from uu7.psi.com by mail.netcom.com (8.6.9/Netcom)  
id OAA01585; Tue, 17 Jan 1995 14:34:18 -0800  
Received: from mgate.arrl.org by uu7.psi.com (8.6.9/SMI-4.1.3-PSI)  
id RAA18615; Tue, 17 Jan 1995 17:02:47 -0500  
Received: by mgate.arrl.org (Smail3.1.28.1 #6)  
id m0rUL0H-000BANC; Tue, 17 Jan 95 15:59 EST  
Subject: ARLX003 Progress toward WRTC 95  
To: QST@arrl.org  
>From: wlaw@arrl.org  
Organization: American Radio Relay League  
Date: Tue, 17 Jan 1995 15:59:47 EST  
Message-Id: <\$arlx003.1995@ampr.org>  
Sender: owner-wlaw-list@netcom.com  
Precedence: list

From boatanchors@theporch.com Thu Jan 19 20:13:21 1995  
Date: Thu, 19 Jan 1995 18:04:09 -0600  
Message-Id: <Pine.3.05.9501191859.A20042-c100000@booz.bah.com>  
From: JD Delancy <k1zat@bah.com>  
Subject: Re: ARRL petitions ITU to drop code

Is this for real or someone's April Fools joke three months early? Several things do not jive. See below.

On Thu, 19 Jan 1995 David=Douglas%Sys=Mgmt%Sys=Hou@bangate.compaq.com wrote:

> From: w1aw@arrl.org  
> Sender: owner-w1aw-list@netcom.com  
> To: QST@arrl.org  
>  
> SB SPCL @ ARL \$ARLX003

-----^

The body calls for a bid of ARLX003 where as the subject line (below) of the supposed bulletin calls for ARLX004

> ARLX004 ARRL To Petition ITU To Drop Code Requirements  
>  
> ZCZC AX72

ARLX003 came out of Newington with a channel number of AX72; so did ARLX004; not likely.

> QST de W1AW  
> Special Bulletin 4 ARLX004  
> >From ARRL Headquarters  
> Newington CT January 17, 1995  
> To all radio amateurs  
>  
> SB SPCL ARL ARLX004  
> ARRL To Petition ITU To Drop Code Requirements  
>  
> In a formal petition announced today by ARRL International Affairs Vice President Larry Price, W4RA, the ARRL has requested that the ITU drop all Morse code requirements for licensing of amateurs in the United States. Citing the number of newly licensed Technician class amateurs (for which the Morse code elements are not required), and based on extensive feedback from five recent surveys, it is apparent that the code requirements have become "a substantial hinderance to the furtherance of the craft". Though the next scheduled meetings of the ITU board is not until February, 1996, the ARRL has committed to laying the groundwork for the radical change as soon as possible.  
>  
> When questioned about the proposed change, Michael Covey, Assistant Director of the Federal Communications Commission, said that he was surprised that the request was so long in coming. Though he stopped short of giving official FCC endorsement for the proposed change, it was obvious from his comments that the FCC would probably not interfere with the process.  
>  
> Additional details, along with the full text of the proposal, will be forthcoming in the next two weeks.  
>  
> /EX  
> ----- Headers -----  
> >From owner-w1aw-list@netcom.com Wed Jan 18 04:31:20 1995

> Received: from mail.netcom.com by mailgate.prod.aol.net with ESMTP  
> (1.37.109.11/16.2) id AA112171480; Wed, 18 Jan 1995 04:31:20 -0500  
> Return-Path: <owner-w1aw-list@netcom.com>  
> Received: by mail.netcom.com (8.6.9/Netcom)  
> id OAA01769; Tue, 17 Jan 1995 14:34:58 -0800  
> Received: from uu7.psi.com by mail.netcom.com (8.6.9/Netcom)  
> id OAA01585; Tue, 17 Jan 1995 14:34:18 -0800  
> Received: from mgate.arrrl.org by uu7.psi.com (8.6.9/SMI-4.1.3-PSI)  
> id RAA18615; Tue, 17 Jan 1995 17:02:47 -0500  
> Received: by mgate.arrrl.org (Smail3.1.28.1 #6)  
> id m0rUL0H-000BANC; Tue, 17 Jan 95 15:59 EST  
> Subject: ARLX003 Progress toward WRTC 95  
> To: QST@arrrl.org  
> From: w1aw@arrrl.org  
> Organization: American Radio Relay League  
> Date: Tue, 17 Jan 1995 15:59:47 EST  
> Message-Id: <\$arlx003.1995@ampr.org>  
> Sender: owner-w1aw-list@netcom.com  
> Precedence: list  
>

From boatanchors@theporch.com Thu Jan 19 20:19:46 1995  
Date: Thu, 19 Jan 1995 18:24:39 -0600  
Message-Id: <199501200024.SAA03758@theporch>  
From: Jack Taylor <n7oo@huachuca-emh8.army.mil>  
Subject: Re: ARRL petitions ITU to drop code

An even greater "hinderance to the furtherance to the craft" is the requirment that licensees take an examination....

From boatanchors@theporch.com Thu Jan 19 20:33:59 1995  
Date: Thu, 19 Jan 1995 17:58:46 -0600  
Message-Id: <Pine.3.89.9501192245.A9085-01000000@inet.uni-c.dk>  
From: MEC <danmec@inet.uni-c.dk>  
Subject: Re: ARRL petitions ITU to drop code

I am very upset that ARRL is proposing a no-code licence.

Are we not to be separate from the CB-crowd at all ?

73 Rag OZ8RO

From boatanchors@theporch.com Thu Jan 19 22:30:20 1995  
Date: Thu, 19 Jan 1995 20:38:10 -0600



Message-Id: <Pine.3.89.9501191826.A25970-01000000@netcom13>  
From: paul Veltman <veltman@netcom.com>  
Subject: Re: ARRL petitions ITU to drop code

On Thu, 19 Jan 1995, Jack Taylor wrote:

> An even greater "hinderance to the furtherance to the craft" is the  
> requirment that licensees take an examination....  
>

That's a big 10-4, good buddy!!! :-(

Paul WA6OKQ

From boatanchors@theporch.com Thu Jan 19 22:51:55 1995  
Date: Thu, 19 Jan 1995 20:54:32 -0600  
Message-Id: <2F1F16ED@sharkgate.sandiegoca.attgis.com>  
From: "Kenan, Larry" <llk@sandshark.sandiegoca.ncr.com>  
Subject: RE: ARRL petitions ITU to drop code

> From: w1aw@arrl.org  
> Sender: owner-w1aw-list@netcom.com  
> To: QST@arrl.org  
>  
> SB SPCL @ ARL \$ARLX003  
> ARLX004 ARRL To Petition ITU To Drop Code Requirements

I hope that this would not result in any immediate changes in the CW band allocations. Then if we make significant use of CW then the reassignment to share the whole band with voice would be delayed.

ER magazine expressed the concern that without the code test filter, the increase in SSB activity would cause pressure to ban AM operation. Probably that is true and it would be a sad time for the Boatanchors - but we can still make good use of them for CW.

Larry Kenan - KD6CKR

From boatanchors@theporch.com Thu Jan 19 21:34:09 1995  
Date: Thu, 19 Jan 1995 19:43:57 -0600  
Message-Id: <9501200444.22618.AA@smrouter.AAC.COM>  
From: Johnson\_Dan@aac.com  
Subject: Re: ARRL petitions ITU to drop code [fake]

In addition to the BID inconsistency which has already been mentioned (and also misspelling errors which W1AW rarely if ever commits), whoever created the message neglected to properly terminate the bulletin.

But the real kicker is the RFC-822 headers shown for the alleged forwarded message which clearly indicate that the "ARRL petitions..." message is a fake. I know how to read RFC-822 and decline to explain further. Anyone with half a brain can forge Internet mail and I don't wish to encourage it. Playful or not, you're toying with trust.

It's a definite fake, folks.

KC4EWT  
Johnson\_Dan@aac.com  
Author, MBLink inbound SMTP gateway

From boatanchors@theporch.com Thu Jan 19 20:23:33 1995  
Date: Thu, 19 Jan 1995 18:31:37 -0600  
Message-Id: <9501200031.AA19207@sumter.awod.com>  
From: wb4ijn@awod.com (Steve Thomason)  
Subject: B&W 5100 FOR SALE

Here's an item I left off my earlier posting:

B&W 5100 TRANSMITTER: Beautiful cosmetic condition! Have had it for a couple of years, but I guess I'll never get around to putting it on the air. The original owner was a CW operator, so he took the modulator unit out so the filaments wouldn't run! Of course, he kept the modulator and of course I have it. He also removed the 75 ohm lowpass filter and converted it to 50 ohms but he wouldn't give that to me. \$250.  
73, Steve, WB4IJN

Internet: wb4ijn@awod.com  
Packet: WB4IJN@N4CII

From boatanchors@theporch.com Thu Jan 19 20:01:11 1995  
Date: Thu, 19 Jan 1995 17:52:07 -0600  
Message-Id: <199501192110.QAA15107@netcom.netcom.com>  
From: azoth@netcom.com (Az0th)  
Subject: Collins Filters

Yo ho ho BoatPeoples,

While rooting around in the innards of my new old JRC NRD-515 (OK OK, I confess: I like silicon BA's too,) I discovered that a pair of Collins mechanical units had been installed on the filter option board instead of the usual oriental devices. Now this wouldn't concern me much, except that they work not nearly so well as I'd like to expect. Aha, says I: impedance mismatches (and a little voice in the back of my mind squeaks: blow-by!) But I know virtually nothing about Collins filters, the care and feeding thereof.

If there are any here assembled that might have the particulars on a couple of Collins Mechanical Filters, I could perhaps learn sufficient to deal with this anomaly, or perhaps find a better use for them. The part numbers on the cans (3" long x 0.5" square, black):

526-9694-010-8615 and  
526-9690-010-8207

The former is coupled through a .001 on each lead and was said to be a 3.8 kHz unit, the latter has no caps and was said to be 600 Hz unit.

Can anybody tell me what's really in these little black boxes? };-]

Cheers es 73  
RF Buchanan

From boatanchors@theporch.com Thu Jan 19 08:17:19 1995  
Date: Thu, 19 Jan 1995 05:54:44 -0600  
Message-Id: <950118231242\_5858971@aol.com>  
From: Scgilstrap@aol.com  
Subject: CW lives!

We've got a winter storm warning in effect tonight here in nor'east Oklahoma and I noticed that one of the local TV stations uses a Morse Code (yes, CW) transmission of the letters WX to alert their viewers as they start to scroll the weather warning text across the bottom of the screen. Now is that a classy touch or what? And it really got my attention. I was in another room (the one with the refrigerator ;-) ) when I heard it through all that QRM of knocking bottles and jars around looking for the last slice of pizza. Nothing gets through like CW.

But I wonder, has anyone else heard CW being used by other traditionally non-CW sources? Are a lot of other TV stations doing the same thing? Personally, I like the use of CW. Remember some of the old newsreels using CW ... Attention Mr and Mrs America and all the ships at sea ... or something like that. I tried copying that

stuff once but I wasn't up to the task at the time. Good ol' CW, the more the merrier. Oops, channel 8 is sending it again. I better go see if we'll be snowed in tomorrow.

73,

Stan

From boatanchors@theporch.com Thu Jan 19 08:38:37 1995  
Date: Thu, 19 Jan 1995 06:26:49 -0600  
Message-Id: <Pine.3.89.9501191348.A22926-0100000@inet.uni-c.dk>  
From: MEC <danmec@inet.uni-c.dk>  
Subject: Re: CW lives!

Radio Denmark uses CW announcing news broadcast , letters DA ! hi

73 Rag OZ8RO

From boatanchors@theporch.com Thu Jan 19 10:03:46 1995  
Date: Thu, 19 Jan 1995 07:47:59 -0600  
Message-Id: <Pine.3.89.9501190835.B19902-0100000@indy1>  
From: "Roberta J. Barmore" <rbarmore@indynet.indy.net>  
Subject: Re: CW lives!

On Thu, 19 Jan 1995 Scgilstrap@aol.com wrote:

> [...] local TV stations uses a Morse Code (yes, CW) transmission of  
> the letters WX to alert their viewers [...]  
> [...] CW being used by other traditionally non-CW sources?

Not quite the same thing, but the LPTV we somehow ended up with in a city where the company already had a full-power TV station (!) uses slow-speed CW FSK of the visual carrier to ID itself every 45 minutes. The folks at home don't notice a thing. It's hard to see even if you're looking for it and have a spectrum analyzer going. (I got to double-check that the proper call was burned into the EPROM, only time I've ever been paid for CW work!)

(Our weather warnings use an even older signalling protocol, three slow dits. It's not as interesting but it gets the job done).

73,

--Bobbi

From boatanchors@theporch.com Thu Jan 19 10:39:40 1995  
Date: Thu, 19 Jan 1995 08:23:49 -0600  
Message-Id: <Pine.SUN.3.91.950119091651.9692D-1000000@access3.digex.net>  
From: Tony Stalls <rstalls@access.digex.net>

Subject: Re: CW lives!

On Thu, 19 Jan 1995 Scgilstrap@aol.com wrote:

> Personally, I like the use of CW.

Ditto!

> Remember some of the old newsreels using CW ... Attention Mr and Mrs  
> America and all the ships at sea ... or something like that.

I think that was Walter Winchell's radio show. "Good evening Mr. & Mrs.  
North America and all the ships at sea..." as I recall it. Uhhh... I mean  
as my grandparents told me... Yeah... That's the ticket! My GRANDPARENTS  
told me about it! didididit didit

73,

Tony  
K4KY0

From boatanchors@theporch.com Thu Jan 19 00:50:59 1995  
Date: Wed, 18 Jan 1995 21:50:40 -0600  
Message-Id: <199501190350.UAA19747@Freenet.HSC.Colorado.EDU>  
From: al511@freenet.hsc.colorado.edu (Robert Neece)  
Subject: Drake noise blankers

Andy Wallace writes:

>The 2-A and 2-B had  
>noise blankers built in, except for a very early 2-A which had that  
>switch as power for the Q-multiplier (2-AQ).

A slip in Andy's typing?

The R-4 was the first Drake receiver with a built-in noise  
blanker. Perhaps the 2-A and 2-B had built-in noise \*limiters\*,  
but they most assuredly did not have factory installed noise \*blankers\*.  
As I recall, the pioneering noise blanker in ham gear appeared  
in the Squires-Sanders SS1R in about 1964, which was later than  
the Drake 2-B. The R-4 followed in the footsteps of the SS1R.

--

73 de Bob, K0KR

From boatanchors@theporch.com Thu Jan 19 11:52:29 1995  
Date: Thu, 19 Jan 1995 09:32:49 -0600  
Message-Id: <Pine.3.89.9501190932.A17713-0100000@ozarks>  
From: "C. Frank Gilmore" <fgilmore@ozarks.sgcl.lib.mo.us>  
Subject: Re: Drake noise blankers

> The R-4 was the first Drake receiver with a built-in noise  
> blanker. Perhaps the 2-A and 2-B had built-in noise \*limiters\*,  
> but they most assuredly did not have factory installed noise \*blankers\*.  
> As I recall, the pioneering noise blanker in ham gear appeared  
> in the Squires-Sanders SS1R in about 1964, which was later than  
> the Drake 2-B. The R-4 followed in the footsteps of the SS1R.

Bob the SS1R did have a great noise blanker (was a dealer for them) but it was not the first. Collins had introduced a short-lived noise blanker as early as the KWM-1, and then their infamous sampling noise blanker in the KWM-2. I bit on one when I bought an KWM-2 in '61. It required a separate antenna at, I believe, 40 mhz or so, to pick up the ignition noise. I had the rig in my car. It worked fairly well on the ignition noise of mine and other cars but other than that was useless.

...  
When the Drake noise blanker came out on the 4 series I was so impressed I bought one and it looked rather odd sitting between a pair of 75A4s!! But it made the difference in many a noisy DX session. I had tried the blankers offered for the A4 but they were the same basic design as the sampling type and in a home environment did not do much unless you lived next to a freeway. My problem has always been line noise above all else.

..  
My Timewave DSP-59+ is the first truly effective blanker for 'everything.' I did applaud the dual blankers in the Kenwood 940S because I could fine tune them to get rid of the old "woodpecker" that plagued us on 20.

..  
As a dealer through the 70's for most all lines the hardest thing to explain to someone who had just spent a fortune on a good receiver was why the noise limiter didn't do all that much. I finally had a small handout printed that I gave them. Hi!

BTW one of the most interesting blanker experiences was when I followed an article in CQ or 73 and began installing Heath SB line blankers in Collins S line receivers. I put a dozen or more in and they were great. Still have one or two kits around somewhere. Was not a fan of the SB line but that is another story...but their blanker was good.

73, de K0JPJ ex-W5PVX ...--

From boatanchors@theporch.com Thu Jan 19 20:14:54 1995

Date: Thu, 19 Jan 1995 18:14:15 -0600  
Message-Id: <199501191840.LAA03319@Freenet.HSC.Colorado.EDU>  
From: al511@Freenet.HSC.Colorado.EDU (Robert Neece)  
Subject: Re: Drake noise blankers

Hello Frank,

I knew I should have been more specific. I thought the KWM-1 and KWM-2 blankers to be after-market, external accessories, whereas the SS1R and R-4 blankers were the first internal, standard-feature blankers. But, perhaps the SS1R blanker itself was an option.

In any case, I loved your essay on blanker history. In the early 1960's, Herbert Hoover, Jr., K6ZH, wrote a classic, pioneering QST article on a blanker for Loran QRM on 160 meters. That article is one of the things that whetted my appetite for an R-4 when it was introduced.

Those good, traditional K0 and W5 calls of yours are nifty, too. That era was full of fun times for me. (I'm ex- K7VRT, W9HRB, and W0LBP; let's see, do I hear a creaking in my bones?)

By the way, Frank, did Waters, among its many after-market Collins accessories, ever try a blanker?

--

73 de Bob, K0KR

From boatanchors@theporch.com Fri Jan 20 00:28:58 1995  
Date: Thu, 19 Jan 1995 22:33:00 -0600  
Message-Id: <Pine.3.89.9501192221.A6475-01000000@ozarks>  
From: "C. Frank Gilmore" <fgilmore@ozarks.sgcl.lib.mo.us>  
Subject: Re: Drake noise blankers

On Thu, 19 Jan 1995, Robert Neece wrote:

>  
> Hello Frank,  
>  
> I knew I should have been more specific. I thought the  
> KWM-1 and KWM-2 blankers to be after-market, external accessories,  
> whereas the SS1R and R-4 blankers were the first internal, standard-  
> feature blankers. But, perhaps the SS1R blanker itself was an  
> option.

In the case of the KWM-1 it was available factory installed...I am not sure about the KWM-2. I did see some SAC KWM-2As which I am told by a

Collins historian more knowledgeable than me were ordered with the blanker installed. I had a SAC KWS-1 for a while and had great plans to modify to the standard coverage of the regular KWS-1 I was using...after seeing all the differences I chickened out! SAC ordered some strange stuff.

I will have to check on the SS1-R in my files (which are in a building with snow drifts of three feet right now) I honestly don't remember if it was included or not. Since I never throw anything away I probably still have the invoices to my store From Squires-Sanders. BTW they were a great company to do business with. The first SS1R that came in lost it's drive motor in a week or so of sitting as a demo....they air freighted me another receiver when I called them. And that was when air freight a fortune.

> By the way, Frank, did Waters, among its many after-market Collins  
> accessories, ever try a blanker?

One was shown on a dealer price sheet but I don't know if it ever actually made production. That was another good company. I still use a Waters CODAX keyer for CW mobile. I was surprised when they sold out to B & W....but that was another good firm. I sold the daylights out of the 813 amps they produced...used the "S Line Look" model myself on a MARS RTTY frequency for years. I did the unthinkable of modifying the power supply by adding a plate voltage meter on the mesh cage. Hi! One of the few mods I ever made to any commercial rig that altered the appearance... but I lived in a small town at the time on rural electric and the plate voltage varied widely.

73 de K0JPJ ex-W5PVX

From boatanchors@theporch.com Thu Jan 19 19:47:46 1995  
Date: Thu, 19 Jan 1995 17:43:42 -0600  
Message-Id: <9501192007.AA27766@jsun.agen.okstate.edu>  
From: vmike@agen.okstate.edu (Mike Veldman)  
Subject: filter chokes

greetings again,

My thanks to those who have replied to my question. I should have been a little more specific in my query though, in that I've had good luck so far estimating the capacity of those chokes that I could see the laminations and windings on. At least I've not let the smoke out of any of the ones I've guessed on to date. The ones that seem to collect are sealed, mostly military surplus types. I plan to give a composite of the methods contributed a try in



the near future and will supply my results to the group.  
thanks again.

mike

WDOCTA

From boatanchors@theporch.com Thu Jan 19 20:20:17 1995  
Date: Thu, 19 Jan 1995 18:29:08 -0600  
Message-Id: <65081.morgan@speckle.ncsl.nist.gov>  
From: "Roy Morgan" <morgan@speckle.ncsl.nist.gov>  
Subject: Hallicrafters Transformer info needed.

Anchorites,

I have the following transformers, and want:

- What transmitter they came from
- Copy of schematic, or what tubes they ran with
- Any lore

Plate: TF1A02MB CTC 15807  
Hallicrafters 52C218  
Chicago Transformer Div.  
Essex Wire Corp.  
... Zanesville, OH 870 v, 250 ma.

Modulation:  
TF1A14YY  
Pri: 21K ct, 200 ma  
Sec: 8K 250 ma  
Frequency response: 150 - 3000 cps +/- 2db  
Saratoga Industries HC-171-M  
Hallicrafters No. 55C202

Thanks in advance ... Keep 'em glowing!

-- Roy --

Roy Morgan / Tech A-266 / NIST / Gaithersburg MD 20899  
(National Institute of Standards and Technology, formerly NBS)  
301-975-3254 Fax: 301-948-6213 Internet: morgan@speckle.ncsl.nist.gov

---

From boatanchors@theporch.com Thu Jan 19 07:32:37 1995  
Date: Thu, 19 Jan 1995 01:10:25 -0600  
Message-Id: <Pine.3.87.9501182122.A2947-0100000@steroid.ecst.csuchico.edu>  
From: "Chasing the F-2 layer." <kn6al@ecst.csuchico.edu>  
Subject: Re: Homebrew Trans!

Greetings Bob et. al.!

A bit more elucidation on bottle brewing...

On the topic of tank coil forming:

Did this go unnoticed? :)

> > P.S; So I \*can\* go to 20m (no higher) and still leave it a 2-tub'er? :)

> I don't use miniductor or similar stock, because it is not ``period enuff''  
> for me. I do use plain old black irrigation pipe, heavy guage, of 1/1.5/2  
> inch diameter and hand-wind the coils out of black no. 14 household  
> solid copper wire. That works fine on rigs up to the hundred watt range.

I'm sold on winding my own, but my admittedly limited prior experience with coil winding was less than satisfactory: I assume the black plastic ABS piping is simply a winding form, and not an integral part of the finish coil itself?? In my prior experience, the coil never seems to hold the shape and diameter of the coil form, it always "springs out" .25" or more after winding. And how do you give a coil of 60 or more turns body, or regidity?? They seem inevitably to be these saggy, Medusa-esque' things...

The German craftsman in me longs for those 4 clear plastic "sausages" that keep air-dux in perfect, spaced, form... ... :)

Impart to us, O' wonderous wizard, the secrets of  
\*perfect coil winding!!

(afterthought: perhaps the #14 solid copper wire is at least part of the answer.)

> >

> > In looking over the N9GT 6L6 ckt, it looks as if he used a .001 disc  
> > cap to couple the 6L6 plate to the tank, Thikning aloud: this is OK on  
> > a pip-squeak rig but would be a larger postage stamp mica on a bigger trans?

> > If one wanted to "over engineer" this beauty, would you suggest say  
> > a .001uf 1kv mica?

>  
> As a minimum, I would use a 1kv cap. If I wanted to over-engineer, I would  
> go to the 1-3kv class postage stamp micas (the bigger 1/4 - 3/8 inch sized  
> ones, not the small receiver class ones), for this particular rig.  
> Hint --- Use what is in the junk box!

>

OK. I got a good few .01uf 1kv postage stamp micas from my treasure diggin's at HSU last spring... The type 4LS, with 2 mounting holes and 2 solder lugs. Using the "Hint ---" above, can .01uf's be sub'd for the .001uf's? (Both 6AG7 to 807 coupling, & 807 to PI-net output)

> Rule of thumb number one: Grab what you have out of the junk box!

In the frank comment, and thinking aloud category; I think what keeps me as a "novice" brewer from simply (and liberally) substituting various component values is the fear of dreaded parasitics, harmonics, chirpy-twerpy birdies, and anything else that may lead to a dreaded pink ticket from our uncle. Or some other unforeseen consequence!

Whereas, if you (I) follow a "cookbook" and use the security of exact values, well, at least you have the benefit of some other more experienced OM's knowledge...

> Anything within 2 x value over rated or over sized will usually work  
> just fine in the way of bypasses or coupling capacitors. The same  
> holds true of inductors like RF chokes. Usually you will never want  
> to size down in value because you may be reaching limits of bypassing or  
> choking capacity of the unit, in the circuit being built. A very  
> common problem along these lines is the insufficient RF choke often  
> found in home brewed amps for 160 meters.

Does this mean that you can increase RFC value in as an example, the 6AG7 osc. ckt. in the said N9GT 6L6'er in ER (Bob you need to bilge out that issue!) There is a 1mh RFC in series with a 47K to gnd off G1. Can I use with impunity one of my many 2.5mh'ers?

> I have been reading/building/designing these things for 25 years.  
> During that time, I have spent more time on the john perusing the  
> dusty pages of old books/qst's/manuals, etc, than the xyl would like  
> to have had happen. The gist of the distillation of all of that are  
> my rules of thumb for building boatanchors.  
>

One of the marks of a life of value, is to pass on what you know to others. Something you do both at work, and here... Thanks! (I'll bet you know your Glumes and Lemmas too! ;-) )

> With a 430vdc power supply, an 807 would loaf along just fine, as long  
> as the power supply could deliver a good 100-150 mils to the 807. If it  
> is marginal in current capacity, then stick with the 6L6. My guess is  
> that it should work just fine with a xtal oscillator.

Great. So the 6AG7 osc. is only a small load in comparison to  
the 807? Might you know where I can get current spec's for a  
Thordarson T-45556 ??

> > ONCE AGAIN...

> >

> > > Thats it for now ye' kindelers o' filaments...

> > > Best of 73's, and thanks in advance for your sage input!

> > > Carl, KN6AL

> > >

> > Best 73's to:

> > > 73/Bob/NA4G (et. al.) {ie: and the whole BA gang!}

From boatanchors@theporch.com Thu Jan 19 10:01:24 1995  
Date: Thu, 19 Jan 1995 07:33:33 -0600  
Message-Id: <Pine.3.89.9501190722.A19902-0100000@indy1>  
From: "Roberta J. Barmore" <rbarmore@indynet.indy.net>  
Subject: Re: Homebrew Trans!

Hi!

On Thu, 19 Jan 1995, Chasing the F-2 layer. wrote:

> [...] the coil never seems to hold the  
> shape and diameter of the coil form, it always "springs out" .25" or more  
> after winding. And how do you give a coil of 60 or more turns body, or  
> regidity??  
> [...] longs for those 4 clear plastic "sausages"  
> that keep air-dux in perfect, spaced, form... ... :)  
> (afterthought: perhaps the #14 solid copper wire is at least part of the  
> answer.)

Well, I've found even #14 to be a bit springy in the larger diameters.  
(But Boatanchor Bob may have some good tricks to fix that!)

If you want "homebrew airdux," one method is to put a layer  
of waxed paper over your form, then slice out eight long strips of 1/16"  
or heavier clear plastic, 1/8" to 1/4" wide and longer than the finished  
coil will be. Space them around the waxed-paper covered form, securing  
the ends with light masking tape, and wind your coil over this lash-up.

Space the runs as needed. The ends of the coil can be secured with threaded hardware, 6-23 nuts, bolts & washers through the form etc.

Once wound, apply a coat of heavy Q-dope down each strip where the windings cross it; let it sit a spell, then apply another layer and lay down the other four strips, sandwiching the coil in between them, and secure the ends of those strips (the middle, too, if needed). Give it another light coat of Q-dope, let the whole thing dry, and have a look at it. If it needs more doping, do that.

One it's all dry, you carefully unbolt the ends of the coil, take the form and waxed-paper assembly apart, freeing the coil & plastic, trim up the plastic if needed and there you have it, home-made miniductor. (And thanks to Elmer Osterhoudt, who preserved this method in one of his publications).

It is not as elegant as the "fat sausages of clear plastic" melted into the turns by the Dark Arts, but it works and is reasonably sturdy.

Another method used in the long-ago is to drill regularly-spaced holes in strips of insulating material; you wind the coil and then thread three or four of them through it and dope it up. I've never tried this one. It looks as though it would only be good for the heavier coils and would require the patience of a saint.

A version of this is sometimes seen with the really heavy coils made of edge-wound copper strip in various sorts of commercial transmitters; three pieces of metal with the ends bent at 60 degrees hold the strips at each end of the coil and are used to mount it. It's extreme overkill for most ham rigs.

> Does this mean that you can increase RFC value in as an example,  
> the 6AG7 osc. ckt. in the said N9GT 6L6'er in ER (Bob you need to bilge  
> out that issue!) There is a 1mh RFC in series with a 47K to gnd off G1.  
> Can I use with impunity one of my many 2.5mh'ers?

Very probably; all it's doing is letting the grid leak see DC ground without taking the RF down the same path. Sometimes you can see funny effects from self-resonance of RFCs, but this should be safe enough--National R-100 2.5mH@125mA chokes were used all over the low-level stages of a jillion transmitters and are fairly well-behaved, and most every other junkbox 2.5mH RFC is essentially a copy of that component.

> Might you know where I can get current spec's for a  
> Thordarson T-45556 ??

Sure do--Thordarson-Meissner, Mt. Carmel, IL; call them up or write to them. They can give you the specs on any transformer they ever made and

are happy to do it. (I don't have the number handy, drat! But I've done this and it works). Be sure to ask for a catalog, they still make a nice assortment of plate transformers and a few audios.

From boatanchors@theporch.com Thu Jan 19 02:32:24 1995  
Date: Thu, 19 Jan 1995 00:05:13 -0600  
Message-Id: <9501190604.AA03782@kahuna.math.hawaii.edu>  
From: jeffrey@math.hawaii.edu (Jeffrey Herman)  
Subject: Internal tube wiring

Gang: I'm currently looking at the EIA Vacuum-tube Base Diagrams in the ARRL Handbook. I see that several diagrams show multiple grid tubes with one of the grids (screens) internally connected to the cathode. Why is this done?

Jeff NH6IL (a 19-year General still asking Novice questions)

From boatanchors@theporch.com Thu Jan 19 19:53:49 1995  
Date: Thu, 19 Jan 1995 11:25:10 -0600  
Message-Id: <9501191726.AA73594@acs6.acs.ucalgary.ca>  
From: "Deane D. McIntyre" <dmcintyr@acs.ucalgary.ca>  
Subject: Re: Internal tube wiring

In message <9501190604.AA03782@kahuna.math.hawaii.edu> writes:

>  
> Gang: I'm currently looking at the EIA Vacuum-tube Base Diagrams  
> in the ARRL Handbook. I see that several diagrams show multiple  
> grid tubes with one of the grids (screens) internally connected  
> to the cathode. Why is this done?  
>  
> Jeff NH6IL (a 19-year General still asking Novice questions)

In pentodes the suppressor grid (the one closest to the plate, called G3 in the RCA receiving tube manuals) is usually operated at the same potential as the cathode. For this reason, in many (most?) pentodes, this grid is internally connected inside the tube to the cathode. This is also why some pentodes (such as the 6A4) have only five pins (six if the cathode is indirectly heated).

73, Deane D McIntyre VE6BP0  
dmcintyr@acs.ucalgary.ca  
>

From boatanchors@theporch.com Thu Jan 19 20:21:18 1995  
Date: Thu, 19 Jan 1995 18:27:04 -0600  
Message-Id: <71467.morgan@speckle.ncsl.nist.gov>  
From: "Roy Morgan" <morgan@speckle.ncsl.nist.gov>  
Subject: MANUALS Wanted: EICO 315, HP 200CDR, Beckman 905 WWV Rcvr ...

Wanted: Manuals or schematics for:

EICO 315 Signal Generator

Hewlett Packard 200 CDR Signal Generator

Rutherford B7B Pulse Generator

Beckman/Berkely 905 WWV Receiver

-- Roy --

Roy Morgan / Tech A-266 / NIST / Gaithersburg MD 20899  
(National Institute of Standards and Technology, formerly NBS)  
301-975-3254 Fax: 301-948-6213 Internet: morgan@speckle.ncsl.nist.gov  
---

From boatanchors@theporch.com Thu Jan 19 20:41:33 1995  
Date: Thu, 19 Jan 1995 11:16:32 -0600  
Message-Id: <950119171241\_71333.144\_DHQ73-2@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: Military Gear For Sale

Vintage Radio Gear For Sale

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228  
412-234-8819 (weekdays, EST or leave a message anytime).

#### MILITARY RADIOS AND EQUIPMENT

INTRODUCTION TO THE TCS: The TCS radio set was designed by Collins for intership communication on the HF bands. The TCS was found on most small and mid-size US Navy vessels from 1943 through 1960. Many thousands were made, some by Collins, mostly by other subcontractors. The set consists of a separate transmitter and receiver, dynamotor power supply, 3 cables, a remote control box with speaker and an antenna tuner for short whip antennas. Also available were a plug-in noise limiter for the receiver, a 100vac60cps power supply and a spares kit consisting of 2 chests full of parts. The TCS transmitter was notorious for its chirpy CW signal. The receiver is stable, but noisy. The combination is a fun rig to operate.

Collins TCS-12 Radio. Transmitter, Receiver, Dynamotor, Cables, noise limiter kit, antenna loading coil, cables and control box. All except the control box and loading coil are made by Collins and excellent, unused in their original military shipping boxes. The control box and loading coil are used in good condition. The transmitter and receiver have some scuffs at the corners (from being improperly repacked after they had been opened). And the receiver has a small chip of paint off of the face. But (except for the control box and loading coil) everything looks excellent or better. The transmitter is gray and the receiver is black. The dynamotor supply and noise limiter kit are brand new, unopened in the original packaging. Last "12" set left. Incredible! \$375

TCS-5. Early Collins-made TCS set with gray transmitter and black receiver. These are not quite new-in-the-box, but they look absolutely sparkling. With antenna loading coil (used), noise blanker kit (new-in-box), cables and control box (used) and complete spares kit plus dynamotor supply brand new in unopened wooden crate. Excellent+. Last "5" set left. \$375

Collins TCS dynamotor supply. New-in-unopened-packaging. Mint. \$115. One left.

Collins TCS noise limiter kits. New-in-packaging. \$15 each. 3 left.

TCS spares kit--chest 2 of 2. Seems to be mostly dynamotor spares.

New-in-unopened-original-packaging. \$65. One left out of 11. I have never had any of--or even seen--chest 1 of this 2-chest set.

Collins TCS-12 110vac supply PP-380/U. The most rare TCS accessory. Plug-in replacement for the dynamotor supply using same cables. I have several of these in varying conditions:

Parts available: Call me if you need any PP-380/U parts.

Parts set, complete but cosmetically and electrically rough: \$32 each. Two left.

Cosmetically fair and electrically fair: \$55. Two left.

Cosmetically and electrically very good or excellent: \$119 (last one)

TBX-6. WWII-vintage transmitter-receiver used by the Marines throughout the Pacific war. This one is the most complete set I have ever seen. Inside the scruffy, weathered transit case, the set is not quite brand new. It includes EVERYTHING: all the canvas bags, radio, battery box, hand generator, key, mic, headphones, antennas and a almost complete set of spares. Serial number 41. The transit case is rough but restorable. The zippers on the canvas bags need work to loosen and lubricate them. But the canvas bags look brand new. Overall the entire set is in near-mint condition. Many of the accessories are untouched in their original packaging. Unbelievable! \$999

TBX-6 transmitter/receiver only. WWII marine HF transmitter/receiver.

With cover and calibration charts. Nice set in excellent condition. \$199

TBX-8 transmitter/receiver only. Famous WWII-era set used to support all of the Marine Corps amphibious landings in the Pacific. Extra-nice original condition. \$199

EF-8 gas generator. This is the principle power unit for the TBX. With gas can, oil can and spares kit and cable (!--it may be worth is just to find that!) all in beat-up transit case. New. Opened, but never used



and never unsealed. \$119 + a big shipping bill.

Navy RBZ "brick" receivers. This is an HF receiver-only designed for portable, hands-free use. It looks like a 12 inch long, olive drab 2x4. The receiver only has 2 controls, volume and tuning, and 3 connectors, headset, power and antenna. It tunes 1.9mhz-5.8mhz. The separate battery box looks identical minus the controls as does the 110vac supply. The antenna is just a short cord with a clamp apparently designed to clip on to the operator's steel helmet! The headphone elements are mounted in a thin cloth head cover designed to be worn under a helmet.

Complete RBZ: Receiver, battery box, AC supply, headset and antenna cord. Manual photocopy. Excellent. \$199

Partial RBZ set: Receiver and AC supply only. With manual photocopy. Nice: \$109

RBZ AC supply only. Case has large unoriginal hole in side: \$32

RBZ AC supply chassis only. No case or tubes. \$19

RBZ Manual photocopy separately: \$12.95 postage paid

DAG-x direction finders. This is a WWII-vintage Navy RDF set with separate loop and sense (whip) antennas that plug in to the top. The whole thing is in an 18" square, 6" deep metal suitcase with a leather handle. The receiver is HF covering about 2-20mhz in 3 bands. The receiver sits in the top half of the suitcase with the battery compartment and headset storage compartment below. The 2 antennas store in clips inside the suitcase lid. Manual photocopy included with each set, but no headphones. I have 2 of these left:

DAG: This is apparently the original model (since it has no -1 or -2 behind the "DAG" on the tag.) This one is olive drab. The case serial number (#518) and radio serial number don't match. It is missing the sense whip antenna (any whip will do) and the battery box cover (a flat piece of metal painted O.D. with 4 retaining screws). It has some paint chips around the edges of the receiver. Looks very good or better and works. \$189

DAG-2: I don't think too many of these were made. This one is serial number 4. It is Navy Gray instead of olive drab and it appears to be brand new. No antennas and no headset. Untested. \$139

DAG manual photocopy separately: \$14.95 postage paid

SCR-300/BC-1000 backpack radio. WWII-vintage backpack set used throughout the war. Includes radio, battery box, cable, short antenna, all canvas straps and several of the pads and bags. No earphones, lip mic, handset or other antennas. The radio has a few dents and a weathered look to it. But it still looks sharp. The canvas straps, bags and pads are near-mint. This is genuine WWII-vintage Signal Corps-issue. Don't mistake this one for 1960's-vintage Fair Radio NATO surplus--this is the real thing.

Tubes not included. \$135

Military PP-114/VRC-3 vibrator power supply for the SCR-300 (BC-1000) WWII vintage backpack radio. Used, excellent. Three left. \$55 each.

Military ID6/APN4 Indicator. From WWII-vintage LORAN set--the first LORAN set ever produced. The rest of the set included a power supply and receiver (which I don't have). Nice front panel but black wrinkle

on case is flaking. No mods. Untested. \$65

Another ID6/APN4 Indicator. Missing 3 knobs and one lever switch has been removed. Nice front panel. No unoriginal holes. Untested. \$35

Radio Station RS-6. Issued to pilots flying over enemy lines and "spies" operating behind the lines during the 50's and 60's cold war. This is a little 4-part rig (TX, RX, power supply and power supply filter) that cables together into a slick HF set covering 3.0 - 16.5mhz in 2 bands. The transmitter is a crystal-controlled 2E26/6AG7 rig, CW only, and has a neat fold-out telegraph key. The receiver is VFO-tuned or crystal controlled using 5718 and 5899 wire-lead subminiature tubes. The AC power supply uses a 6X4 rectifier while the filter uses 5644 subminiature VR tubes. 6 volt battery operation is also supported. Each unit is about the size of a small cassette recorder. All four units included. The sets had several accessories, all pretty scarce: Instruction cards, earphone, hank antenna, antenna clamps and clip leads and waterproof bags. If you're not familiar with this radio, send me a SASE and I'll send you a photocopy of the write-up from the February, 1993 AWA Old Timer's Bulletin. I have just four sets left, all untested. A manual photocopy included with each set. Accessories are sold separately or packaged with the set.

1. Good+ condition, scratches and dings are numerous, but overall looks are still good: \$269 w/accessories, \$219 without.
2. Good+ condition, scratches and dings are numerous, but overall looks are still good: \$269 w/accessories, \$219 without.
3. Fair condition, power cables missing, paint missing at corners and from back of one unit, scratches and dings are numerous, but still nice: \$229 w/accessories, \$179 without.
4. Fair condition, power cables missing, paint missing at corners of some units and from the back of power unit, scratches and dings are numerous: \$229 w/accessories, \$179 without.

RS-6 Accessories: Instruction Cards (laminated photocopies): \$6/set

Earphone with cord & clip but clip is broken: \$14

Hank antenna, antenna clamps and wire leads: \$8/set

Waterproof bags, used: \$35/set of four

RS-6 extra earphones, clip is missing: \$8 each

RS-6 hank antenna, 2 antenna clamps and wire leads: \$8 each set

RS-6 waterproof bags for power unit or filter only (will not fit RX or TX. Fair condition, may be repaired: \$7 each.

RS-6 parts sets: Call me--I have an RT-6, RR-6 and RP-6 in varying stages of disrepair.

Military "ATR" 2-position receiver rack. The "ATR" packaging was the standard for military aircraft receivers by the end of WWII and through the Korean War era. So this rack fits receivers like the ARB, ARR-15, ARR-5, ARR-7 and many others. The connecting cable box is included but the connectors are missing. The nomenclature tag has been removed.

Lord shock-mount feet included. Nice shape. \$65

Military CY-1218 Control Box. This is the transmitter/dual receiver operating control set from AN/GRC-38, the successor to the SCR-299, 399 and 499 trucks. So this was designed to control a BC-610I and two

Hallicrafters SX-73 receivers. It allows for two local operating positions and one remote (via field telephone). This control box looks very similar to the JB-70 control box in the SCR-399. A pretty sexy add-on to your BC-610 setup--plug-n-play with any BC-610 between the BC-614 speech amp and any two receivers. Made by Hallicrafters. Excellent condition. With AN/GRC-38 partial manual copy. \$159

DY-88 vibrator/dynamotor supply, as-is, unworking: \$27

BC-1335 WWII jeep radio with battery box. Good, untested. \$63

BC-1335 WWII jeep radio with battery box and battery charger. Used, good, untested. \$93

RM-13J remote control unit for BC-191 and others. This is the one with the handset cradle on top. Used, excellent: \$39

BC-611 switch cover. Strap-on cover prevents accidental transmission. New-in packaging. Last one. \$7

BC-611 top cover, battery contact and antenna cover. Used, good. \$11. 2 left.

BC-611 Used test sets: \$159 each. WWII issue, not the later round-meter type.

Military WWII BD-71 field switchboard. For EE-8 phones and/or RM-29 hookups to the SCR-284 radio and many others. The wire-line-to-radio workhorse of the war. With legs. Missing pilot light lenses and some small parts.

Good condition otherwise. \$42

ZB-3 homing accessory sets. Originally built for Navy RU and ARA equipment, these were most commonly found installed with ARC-5 sets. Made in 1941 by Western Electric, the ZB-3 is a frequency converter that delivers a 234mhz to 258mhz signal into a receiver that can tune the range 530 - 840khz. Power is supplied by the receiver. Type 954 acorn tubes are used. These sets include the homing adapter, slipcover, pilot's control box, switching relay, connectors and "homing decode cards." Brand-new-in-original-box. With original manual: \$49. Last one.

WWII I-83H Dynamotor test stand. Tests all then-current 14v and 28v types.

Requires 16v and 32v input. Made by Espey mfg in 1943. Used, good. \$35

Signal Corps "Lord" shock mount "feet." These are the equipment feet that are about 2" square and 1" deep made of steel with a semi-flexible rubber center with a hole for a 1/4" bolt. As-new. \$1.50 each. Have many to sell.

## MILITARY DYNAMOTORS

Westinghouse 2-B-6534 dynamotor, 24v in , 300v out @ 70ma, w/mount: \$19

DM-25 dynamotor, no data: \$9

Early ARC-5 11826 dynamotor, 14v in, 250v out @ 60ma, no mount: \$16

Westinghouse DM-34-D dynamotor, 14v in. 200v out @ 80ma, mount modified: \$23

Zenith DM-64A dynamotor, 14v in, 275v out @ 150ma, with mount.

For BC-603/683, I think. \$29

## MILITARY MISCELLANY

BC-654 (SCR-284) legs. These clip onto the BC-654 case and make it into a

real field set! \$34/set of four.

GN-4x legs: These are the straight legs that clip onto the GN-4x generators. \$17/set of 2.

GN-4x generator handles: \$12/pair.

GN-4x leg with wooden seat. Excellent condition. \$11 each

Military TS-13E handset. Used on the BC-1306 and other WWII-era backpack radios. New-in-original box. \$20

Another TS-13E, used, good: \$10

General Radio 724A "Precision Wavemeter." Made under military order number 5252-PHILA-44-05, this is an absorption-type wavemeter covering 16hz to 50mhz. It is in a felt-lined wooden case that is dirty and weathered. But inside it is in near-mint condition. The instrument itself has a beautiful wooden cabinet. The case also contains a bunch of plug-in black bakelite heads. With instructions mounted in metal frames. A treasure! \$95

Military Number 19 Mark II radio set microphone. Scarce accessory for the number 19 set. Three to sell. One has British connector: \$22. Two with no connector: \$11 each. One with no cord or connector: \$7. All Untested.

Number 19 Mark II mount, power supply and power supply to radio cable ("dogbone"). Very dirty, but complete and unmodified. Power supply is untested. Just the accessories, no radio. \$89

Military PRC-6 RDF loop antenna. Brand new in unopened original packaging. Mint. \$35

Military CR-B5/U crystal case for Navy MAW (successor to the MAB/DAV "para-talkies"). It is full of crystals, but I doubt that these are the originals. Good condition but clasp is broken. \$17

Military Gibson-Girl generator and crank handle. This is the geared section that you crank to generate power for the TX and turn the mechanical SOS code wheel (included). Works great. Does not include actual transmitter electronics. \$9

Canvas bag CS-76-B for the RM-29 remote control used with the SCR-284 and many others, fair condition with carry strap: \$18

Canvas bag BG-189 (for SCR-300??), like new: \$22 each. 2 to sell.

811A Tubes for the ART-13. Brand new American-made 811A tubes from the ATC (ART-13) spares kit. In JAN packaging marked "ATC Spares". Unopened. \$45/pair (AES's lowest price on NEW 811A tubes is \$35 EACH)

Military (or Hallicrafters) BC-610 (or HT-4x) tuning units:  
TU-50 (4.0-5.0mhz), TU-52 (6.35-8.0mhz) and TU-48 (2.5-3.2mhz). \$13 each.

Military MP-73 mast base for mounting GRC-9 whip on vehicle or structure. Unused. \$23

Military ATD transmitter spare parts cards: Set of contents/manufacturers cards from the ATD spare parts chest. \$14

Astrocom headset with boom mic. Neat helicopter-driver's styling. With INT/RAD switch on cord. I'm guessing this is 1975-vintage. Complete and excellent. \$9

H-33 handsets. These were used on all the Korean-war era PRC equipment including the PRC-6, RT-70 and many others. These are all in good condition with U-229 connectors and either coiled or straight cords.

Your choice: \$7 each.  
 H-33F/PT made by Audiosears. Coiled cord. 2 available.  
 H-33D/PT made by Shure. Straight cord.  
 H-33/PT made by Packard Bell. 1951 date. Straight cord.  
 Military mic: M-43/U University Sound dynamic. Round face on cone-shaped housing. Basically commercial mic painted green. Canon plug: \$5  
 H-250/U Handset for the PRC-25 and others. \$11  
 AN/GRM-55A PRC-25 test set. Excellent. \$32  
 Military BC-906D VHF frequency meter made by Philco in 1944. Brand new. \$20  
 Military A-62 Phantom Antenna for SCR-508 or SCR-528. As-new. \$12  
 Military A-27 "Phantom Antenna" for SCR 506/BC-193. Brand new. Unused. \$12  
 T-30V carbon throat mic switch: SW-141-v PTT switch only. No cord or mic. \$3  
 AN130A whip antenna (for BC-1000, SCR-300 backpack set) \$11  
 Signal Corps F15U RF bandpass filter on MT plate. \$6  
 R-14 headset with leather headband. PL-55 plug. \$11  
 JK-26 to PL-55 extension cord for ANB-H-1 headset. \$3 each.  
 Vietnam-era H-79 aircraft headphones with boom mic, nice: \$15

#### MILITARY TMs (Originals)

Military ARN-14/14C Manual TO-12R5-2ARN14-12. \$8 each. 2 to sell.  
 Military TRC-8 original manual: \$5  
 ART-13 original schematic from manual. \$4  
 TM 11-296 PRC-6 Use manual. About 1955: \$17  
 TM 11-4096 PRC-6 Field Maintenance Manual w/addendums: \$22

#### OTHER MILITARY LITERATURE (PHOTOCOPIES shipped Postage Paid (PPD))

TCS Partial Manual, covers the TCS-7 through TCS-12 sets along with all the usual accessories. Includes installation, maintenance, schematics and parts list sections. Theory sections are omitted (about 100 pages): \$16.95 PPD  
 TM11-230C, Radio Set SCR-694C (BC-1306) manual photocopy. 1944: \$19.95 PPD  
 Number 19 Mark III manual photocopy. Identical to the U.S.-made set, but for the Canadian and British versions. Decent, complete copy: \$14.95 PPD  
 NAVELEX 0967-LP-115-2010 "Technical Manual for Radio Receiving Sets AN/SRR-11, AN/SRR-12, AN/SRR-13 and AN/SRR-13A." Photocopy of all required info (200+ 2-sided pages). Schematics are on about 100 more pages of 8-1/2x14 paper. \$19.95 PPD  
 TM 11-487 Chapter 14, RADIO EQUIPMENT Photocopy. 1944. \$ 8.95 PPD  
 Covers ALL ground-to-ground radio equipment in service in all branches of the military in 1944. Does not cover radar, airborne and beacon gear. Photos and some diagrams (not schematics) are included. 131 2-sided pages.  
 ECOM-4451, HISTORY OF THE SQUAD RADIO Photocopy. 1976. \$ 8.95 PPD.  
 Covers the development of the "Handie-Talkie," from the earliest days (BC-611/PRC-6) through the "helmet-radio" (PRT-4/PRT-9) variations. Photos and diagrams are included. Backpack radios are not covered but

some European sets are. 98 2-sided pages.  
TM 11-235 BC-611 Use/maintenance manual copy. 1945. \$12.95 PPD.  
CPRC-26: Royal Canadian School of Signals manual copy  
with all addendums. Fair copy. \$10.95 PPD

From boatanchors@theporch.com Thu Jan 19 08:04:37 1995  
Date: Thu, 19 Jan 1995 05:49:32 -0600  
Message-Id: <199501191149.FAA15812@theporch.theporch.com>  
From: bgraham@tecnet1.jcte.jcs.mil  
Subject: Need Eico manual

I need a copy of the manual for an Eico 222 VTVM.  
Mine works, but I want to have a manual and will  
pay copy and mail costs, of course.

Bill

From boatanchors@theporch.com Thu Jan 19 20:00:01 1995  
Date: Thu, 19 Jan 1995 17:56:44 -0600  
Message-Id: <9501191941.AA25116@bobcat.etsu.edu>  
From: wier@bobcat.etsu.edu (Bob Wier)  
Subject: Re: Need Eico manual

At 5:49 AM 1/19/95 -0600, bgraham@tecnet1.jcte.jcs.mil wrote:  
|I need a copy of the manual for an Eico 222 VTVM.  
|Mine works, but I want to have a manual and will  
|pay copy and mail costs, of course.  
|  
|Bill

Bill - I've got an Eico VTVM (built it from a kit) but unfortunately I  
don't remember the model number, and it's at my house in Colorado. I won't  
be back there for a number of months -

If you don't turn anything up, mail me again about the middle of march, and  
I'll check to see what I've got on the next trip back there.

thanks!

-- Round Up the Usual Disclaimers! --  
Bob Wier, CS Dept., East Texas State University  
wier@bobcat.etsu.edu - keeper of the  
Motorola MC68HC11, Photo-3D, SD3D,  
Icom Radio and Overland Trails mailing lists

From boatanchors@theporch.com Fri Jan 20 00:16:59 1995  
Date: Thu, 19 Jan 1995 22:24:33 -0600  
Message-Id: <199501200421.UAA14260@netcom14.netcom.com>  
From: dgf@netcom.com (David Feldman)  
Subject: Need schematic/manual for BTI LK-2000 HF amp

I have a BTI LK-2000 HF amp (3-1000Z in floor-mount cabinet) that I've resurrected. I'd like to get a copy of the manual or schematic of it for future reference. Could anyone help? 73 Dave WB0GAZ dgf@netcom.com

From boatanchors@theporch.com Thu Jan 19 20:18:08 1995  
Date: Thu, 19 Jan 1995 11:12:21 -0600  
Message-Id: <950119171017\_71333.144\_DHQ73-1@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: Old Gear For Sale

Vintage Radio Gear For Sale

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228  
412-234-8819 (weekdays, EST or leave a message anytime).

OLDIES FOR THE AFFICIONADO

Drake B-line: Very nice cosmetic condition with some light scratches and scuffs. No obvious modifications. Original manuals included. T4XB looks and works great: \$119, AC-4, excellent: \$79; R4B, works but sensitivity is down and I noticed some corrosion on the band switch, looks very good: \$119; MS-4, excellent: \$45. All for \$330. I will hold individual offers on the parts for a couple weeks until I see if anyone wants the whole rig.

Hallicrafters SX-11 receiver. 1936-37 vintage general coverage radio (.535-40mhz) with crystal filter, mechanical bandspread and tuning eye. Probably among the most collectible Hallicrafters radios today. This one is good shape but front panel has been lightly oversprayed with flat black and wiped off around lettering. The case is excellent. There are no mods that I can see. The dial (often a problem with 30's Hallicrafters sets) is excellent. And it works (some cap replacement has been done but a full restoration is necessary). Rare radio in rare condition. \$269

Geloso G-209-R ham bands receiver, circa 1959. Covers 80-10 meters. One of very few Italian amateur radio products ever made. Front panel is very good or better. Blue/grey hammertone cabinet is good. Perforated grill on top and chassis have some rust spots. All original knobs, paint and meter (glass cracked). Dial face is clear and logo sparkles. Unworking. \$179

Hallicrafters S-36A WWII-vintage AM/FM VHF receiver. Complete, unmodified. Unworking. Dirty but virtually no scratches or marks--this one should clean up to an excellent looking radio. \$109

Gonset Commander Transmitter. Tiny HF AM mobile rig. Crystal controlled, using plug-in coils. Covers 1.7 - 54mhz. Fair to good condition with some wear and scratches all over. Requires external power supply (which I do not have). Manual photocopy and one coil (40 meters) included. \$45

Barker & Williamson 5100-B AM/CW transmitter. 1956-vintage AM transmitter with 145 watts of input. Internal VFO. Very stable. TVI-free. This one is gorgeous. Not a mark on the front panel and hardly any anywhere else. The dial scale is yellowed, but I have a replacement dial for it.

Teriffic transmitter! Near-mint. It works but no restoration has been done. With original manual. \$289

Gonset G-76 HF transciever. 1960-vintage AM transciever covering 80 - 6 meters. Mobile 12 volt or base station operation using external power supplies. Made famous by a series of articles in Electric Radio magazine. This one has obviously been mobile. It has a few scrapes on the front panel paint and many on the cabinet. But it has no mods and still looks very good. Works okay but RX is pretty drifty. Manual copy. \$169

Gonset G-76 AC power supply. Same form factor as G-76 with eagle logo on front right. Lots of case scratches. Front panel is very good. Works well. \$179

Clegg Apollo 700 6 meter linear amplifier. 10 watts input delivers 700 watts out. Styled to match Clegg Venus transciever. Uses a pair of 8236 finals (\$29 each at AES). 3 meters cover everything. This one looks good but needs new finals. 50 ohms in and out. \$259 as-is or \$335 with new finals installed.

RMCA (Radiomarine Corporation of America--RCA afloat) 8021 "Radiotelephone." Pre-war marine radiotelephone transmitter/receiver with 6 crystal-controlled channels. Handset on left, speaker on right. About 26" long, 14" high and 16" deep. Must weigh 80 pounds. Gray wrinkle cabinet with front panel that looks like knurled aluminum (in that pre-war and wartime RCA marine 81xx receiver styling). Obviously designed for a coastal steamer as the 6 channels are marked (on engraved steel tags) "Boston, Miami, New York, Norfolk, Cst Grd, Ship." Lifting the handset keys the transmitter. Covers 2-3mhz. Really unique. Case has some light rust and this thing shows a lot of neglect. Some tubes missing. But unmodified and pretty easily restored. \$165

Hallicrafters S-53 receiver. Famous 50's novice receiver in very good original condition. Good original paint, no unoriginal holes. Working fine. Manual photocopy. Missing one small knob but it would be easy to have a casting made. \$52

Palco "Bantam" mobile HF transciever. 1956-vintage. Dual-6146's as finals. Probably the most rare HF mobile rig--few were made. With external, bolt-on modulator. Wonderful condition with clean chrome front panels. All original with very few scratches. You don't see these advertised every day. \$240

Hallicrafters HT-5G speech amplifier for the HT-4 (BC-610) transmitter. Excellent cosmetic condition. Complete, unmodified, untested. \$99

Meissner 9-1050 Signal Shifter. This is the one with the tuning eye and



TV-type rotating coil turret for bandswitching. Wiith FM-X modulator, low-voltage supply and high-voltage supply. Paint on high voltage supply chassis is rough. 'Shifter front panel is excellent but case paint is dull and dirty. This is the most complete 'shifter I've ever seen--the factory power supplies are unfindable at any price. \$83

Meissner 150B Transmitter. 1941-vintage, 150 watt, plate-modulated AM transmitter originally designed for broadcast AM radio station use but drafted by the Signal Corps for the duration. CW too. Covers 1500khz through 12mhz. Uses Meissner Signal Shifter VFO and plug-in coils. This one includes two Signal Shifters, one complete set of coils and a few extras and a manual photocopy. Formerly owned by the Chief Engineer of W1AW, the transmitter has been modified for improved audio. It has several unoriginal 3/8" holes in the 1/8" thick steel front panel. It measures 40"w x 18"h x 20"d and weighs just over 250 pounds. It is not modular and could only be shipped at great expense. \$219

WRL Galaxy 300 SSB Transciever. Made back when transievers had STYLE, this radio is a gorgeous combination of gold painted cabinets, black trim and anodized gold front panel with black knobs with gold inserts. The radio covers 80/75-40-20 meters and delivers 300 watts PEP output from a set of 6HF5 sweep tube finals. This one comes with the scarce matching PSA-300 station console that includes the power supply, mechanical digital clock and speaker in one cabinet--color and size-matched to the transciever. Made in 1963, this one is in excellent looking condition and very good operating condition. With original manual. \$155

From boatanchors@theporch.com Thu Jan 19 19:41:13 1995

Date: Thu, 19 Jan 1995 17:45:36 -0600

Message-Id: <199501191802.KAA07581@hobbes.UCSC.EDU>

From: haynes@cats.ucsc.edu (Jim Haynes)

Subject: One Month Until Green Key Night

Oil your Teletypes, set up your boatanchor xmtrs for 850 cps FSK, get everything checked out and ready for Green Key Night Feb 20, when we commemorate the arrival of FSK RTTY on the HF bands in 1953. And remember the late W6AEE, W6NRM, W0BP, and all the other pioneers of HF RTTY who are no longer with us. (But if you don't have a mechanical Teletype, or you can't do 850 cps FSK, join in anyway; let's have some old-time fun, or wallow in nostalgia, or whatever.)

FIGS UE

Jim, W6JVE

From boatanchors@theporch.com Thu Jan 19 08:16:49 1995

Date: Thu, 19 Jan 1995 05:52:05 -0600

Message-Id: <199501191149.FAA15821@theporch.theporch.com>

From: bgraham@tecnet1.jcte.jcs.mil

Subject: Re: Q's: HW-16 and sidetone/connecting 3-wire power

nope... checked my wiring against schematic and it is wall breaker xfmr and wall switch xfmr... will have to change that when I put on the 3 wire cord.

Bill

From boatanchors@theporch.com Thu Jan 19 22:20:13 1995

Date: Thu, 19 Jan 1995 20:22:01 -0600

Message-Id: <950119155814\_6720075@aol.com>

From: Randyc3@aol.com

Subject: Radio Magazine Indexes

Does anyone know of an index for ham radio magazines from 60's to the present? I am looking for several specific equipment mod articles and projects. Hopefully, it is online somewhere....

Thanks

From boatanchors@theporch.com Thu Jan 19 12:46:08 1995

Date: Thu, 19 Jan 1995 10:02:18 -0600

Message-Id: <3D3C5242722@s1.xetron.com>

From: "Jack Giehl" <JACKG@s1.xetron.com>

Subject: Ranger and the SB200

Greetings BA enthusiasts,

I noted that Chris is planning to use an SB200 with a Ranger. My experience has been that the linear scheme is a reasonable way to get more RF into the antenna without significant signal degeneration. In fact, I use a linear with my Ranger and have great results. My linear DOES have a lot more plate dissipation than an SB200, but with proper tuning the SB200 should give good results.

A typical SB200 is capable of 800 watts PEP output. I have had two of them on the bench in the last 3 months, and obtained this power level using 120 volt AC for the linear power. I would recommend that you use 240 volt AC for your SB200.

A typical Ranger puts out 45 watts of carrier, or 180 watts PEP at 100 % modulation.

The key to successful operation on AM with a linear is in the amplifier tuning. Don't try to tune the linear to the AM signal you are planning to run through the linear. Instead, tune the linear to maximum output as you would for normal CW or SSB operation using an exciter with a power of about 100 to 150 watts. Note the power output of the amplifier with a power meter.

Connect the Ranger to the SB200. With the SB200 bypassed and the attenuator in line, tune the Ranger for normal operation. Activate the SB200 and tune the Ranger for 25% of the SB200 carrier power output that was noted above by adjusting the Ranger plate and load. DO NOT adjust the SB200 plate and load from the settings attained in the previous paragraph.

There you have it. You now have 200 watts of carrier, and 800 watts PEP at 100% modulation. This is a healthy 6 db increase over running the Ranger alone.

73, Jack

73,

=====

Jack, WB8BFS

jackg@xetron.com

"Peak the grid, dip the plate, and keep the fire in the wire."

=====

From boatanchors@theporch.com Thu Jan 19 00:48:41 1995  
Date: Wed, 18 Jan 1995 22:24:18 -0600  
Message-Id: <9501182221.aa19113@jackatak.theporch.com>  
From: firebot1@jackatak.theporch.com (Fire Bottle archive handler)  
Subject: Ranger with a linear?

Chris-

Several others have no doubt responded, but I am so far behind after fighting with the Net gateway this weekend, I thought I'd better throw a few pennies into the discussion:

> Also, I am experimenting with using the Ranger to drive an SB-200 (until  
> I gain the parts and experience for my 813 job!!).

What ever for???

Barefoot, your Ranger will put out far more RF than you will get from the SB-200. What you will get is some additional compression (One benefit for the DX'er is the additional signal compression more than the additional RF output -- I have run an amp on SSB at 400W, not for added power (I could use my Alpha for that! ;^) but for the compression and "punch"... on AM, if you are interested in talking with the guys on 3.885, you'll want fidelity rather than compression. Soup helps, but the linear isn't gonna buy you anything you can use, and it will cost you: audio fidelity; electricity bill; equipment fatigue...

> To account for the needed 'headroom' for AM, I theorize that the max.  
> carrier power should be about 200 watts out.

Right. And the Ranger can run that all day and all night. Now, when the SB-200 is cranked in, the efficiency of low-level modulation (amplifying an already modulated signal) drops to around 25% at 500 watts and 25%, we are looking at 125W! Lots of heat being dissipated and not much to say for the effort.

> However, in order to achieve only 200w carrier, I have to reduce the  
> drive on the Ranger.

Look at your situation: let's assume 100% efficiency and address this. Suppose you get normally 275W from the Ranger. At 500W \*out\* (and you will never see that on AM from your SB-200 -- the transformers are nowhere NEAR strong enough in a stock amp) your signal will not even be 3 dB stronger... NO ONE WILL KNOW you are running more power! For that to happen, you'd need to be more than a Kilowatt!

So, why risk blowing up an amp in service it was NEVER designed for [recall your "the manual says nothing about AM use (except noting the benefit of SSB over AM...)"] comment... it came from someone who KNEW.

> concerned with running the Ranger improperly loaded, and having the audio  
> become distorted.

The distortion will be from the compression and emphasis change when run through the amp. particularly given that the amp is designed for AB1 and not pure Class A...

> Any comments would be a blessing.

I wouldn't bet on it! ;^)

73

Jack, W4PPT/M (75M SSB 2-letter WAS #1657/#1789 -- both from the mobile! ;^)

Fire Bottle Server (Boat Anchors Get Out and Keep You Warm!)

firebotl@jackatak.theporch.com

Where Old Radios and Fun ... GO TOGETHER!

+-----human interface: root@jackatak.theporch.com-----+

From boatanchors@theporch.com Thu Jan 19 10:56:18 1995

Date: Thu, 19 Jan 1995 08:38:25 -0600

Message-Id: <9501191432.AA07821@ausable.crd.Ge.Com>

From: mallick@ausable.crd.ge.com (John Mallick)

Subject: Re: Ranger with a linear?

Jack wrote:...

> However, in order to achieve only 200w carrier, I have to reduce the  
> drive on the Ranger.

Look at your situation: let's assume 100% efficiency and address this.  
Suppose you get normally 275W from the Ranger. At 500W \*out\* (and you  
^^

You must be thinking of the Valiant (275W input); the Ranger is only  
65W input on AM. But I still agree with everything else you said,  
about "punch" and "fidelity" :-)

73, John WA1HNL

From boatanchors@theporch.com Thu Jan 19 12:34:37 1995  
Date: Thu, 19 Jan 1995 09:59:11 -0600  
Message-Id: <Pine.3.89.9501190939.A17713-01000000@ozarks>  
From: "C. Frank Gilmore" <fgilmore@ozarks.sgcl.lib.mo.us>  
Subject: Re: Ranger with a linear?

On Thu, 19 Jan 1995, John Mallick wrote:

> Jack wrote:...

>

> > However, in order to achieve only 200w carrier, I have to reduce the

> > drive on the Ranger.

> Look at your situation: let's assume 100% efficiency and address this.

> Suppose you get normally 275W from the Ranger. At 500W \*out\* (and you

> ^^^

>

> You must be thinking of the Valiant (275W input); the Ranger is only

> 65W input on AM. But I still agree with everything else you said,

> about "punch" and "fidelity" :-)

>

> 73, John WA1HNL

>

>

I have to blame E. F. Johnson for part of the problem here.... In one of  
their brochures they showed a Ranger and a Courier paired. Their success  
in using the Ranger to drive the desk KW was so good they pushed it to  
drive any amp. The craziest thing I saw a customer do was try to push a  
quad of modified 1625's with one. His output was less than barefoot.

73, de K0JPJ ex-W5PVX ...-.-

From boatanchors@theporch.com Thu Jan 19 19:41:56 1995  
Date: Thu, 19 Jan 1995 17:39:09 -0600

Message-Id: <Pine.SUN.3.91.950119141810.29280B-1000000@access4.digex.net>  
From: Tony Stalls <rstalls@access.digex.net>  
Subject: Re: Ranger with a linear?

On Thu, 19 Jan 1995, C. Frank Gilmore wrote:

> Their success in using the Ranger to drive the desk KW was so good they  
> pushed it to drive any amp. The craziest thing I saw a customer do was  
> try to push a quad of modified 1625's with one. His output was less than  
> barefoot.

The true worth of amplifiers in most cases probably has more to do with  
harmones than signal strength. ;^)

73,

Tony  
K4KY0

From boatanchors@theporch.com Thu Jan 19 08:39:41 1995  
Date: Thu, 19 Jan 1995 06:30:20 -0600  
Message-Id: <Pine.3.89.9501191333.A22926-01000000@inet.uni-c.dk>  
From: MEC <danmec@inet.uni-c.dk>  
Subject: rec/swap

Can anyone please tell me how to get into the ` swap` system ?  
How to read and how to make an entry.  
tnx 73  
Rag OZ8R0

From boatanchors@theporch.com Thu Jan 19 19:56:26 1995  
Date: Thu, 19 Jan 1995 17:47:38 -0600  
Message-Id: <m0rV1DR-0000SkC@juts.ccc.amdahl.com>  
From: joe.selkregg@amail.amdahl.com  
Subject: SLR-M, RCH

Hi,

I have a Scott SLR-M receiver that would be real nice if it didn't have a  
meter where the eye tube should be. As a result, it also has had the front  
panel cut. Does anyone have a parts set with an unmodified front panel that  
they could sell me?

Also, I have two Scott RCH receivers and would like to trade one for (or

toward) a Scott RBO, or sell for around \$75.00. On a scale of 1 to 10, it is about a 6. The front panel was originally gray and it has been redone and looks nice. It has been partially recapped, aligned and works well. The "1-2-mix" front panel switch has been replaced with a non-ceramic one but other than that there are no mods. Also, it has it's original cabinet (which needs paint).

I live in northern California.

Thanks, Joe S.

From boatanchors@theporch.com Thu Jan 19 21:09:53 1995  
Date: Thu, 19 Jan 1995 19:13:20 -0600  
Message-Id: <F1JJ0228.F1JJ0300@mail.admin.wisc.edu>  
From: TOM.A.ADAMS@mail.admin.wisc.edu  
Subject: subscribe

to: boatanchors@theporch.com

subscribe

From boatanchors@theporch.com Thu Jan 19 10:10:15 1995  
Date: Thu, 19 Jan 1995 07:41:43 -0600  
Message-Id: <199501191342.AA15835@shore.shore.net>  
From: Michael Crestohl <mc@shore.net>  
Subject: The Best Price Ever! Pleasant recollections.....

Greetings, Keepers of the Firey Bottles, Heavy Metal and Anchorus Boatamus!!!

I've been inactive for the past few weeks, but reading my daily Boatanchors digests has not been neglected....

I particularly enjoyed reading the Best Price Ever thread.... and I can't resist recounting the following purchases:

TWO - Collins Mechanical filters in the 'J' can (75A4):

4 KC & 8 KC for a BUCK each!!!! Deerfield NH 198?

A clean PRC-64 (Delco 5300) "Spy" transcievers \$5.00 Deerfield NH 197?

75A4 rx with three filters and original manual for \$125 Canadian at  
the West Island A.R.C. Auction in 1985-6

A Collins KWN2A (R) with PM2 & Carrying Case \$325.00 Canadian  
A 30L1 (W) \$300.00 Canadian (sold it the next day for \$625!)  
so the KWN2A was free!

And if you say that it doesn't happen anymore:

Hallicrafters FM7-HW (military "spy" VHF low-band transciever)  
for a BUCK at the Newington CT (!) flea market 1994.  
(it was laying on the ground, around 11AM!

A MINT Murch Ultimate Transmatch \$20.00 at the A.R.R.L. CT hamfest 1994

Some neat-looking WWII transmitter (looked like a miniature BC-375) with plug-  
in band modules with two modules, including one for 75M) - a bit rusty in  
the screws bit excellent cosmetically--- \$5.00 --- and I finally sold  
it to the guy who kept begging me all morning to sell it to him ---  
for \$175.00! I wonder what it was and what it's really worth. I've never  
seen one like it before or since!

I guess that's enough boasting. Can't wait for the hamfests to start up -  
first one up this way is in February, although there's an antique radio  
flea up in Nashua NH next Saturday and we'll be there!

73,

Michael KH6KD/W1  
mc@shore.net

From boatanchors@theporch.com Thu Jan 19 20:02:29 1995  
Date: Thu, 19 Jan 1995 17:54:17 -0600  
Message-Id: <9501191905.AA101939@csemail.cropsci.ncsu.edu>  
From: rdkeys@csemail  
Subject: Tube Ratings

Since there was some confusion about tube ratings and filament voltages,  
etc, I thought I would clarify some things I had said.....

>From the RCA Technical Manual TT-5 (RCA Transmitting Tubes), 1962.

1. P.125 807 ratings --- Maximum plate voltage 750 volts, as Richard



Loken pointed out. That is intermittent service in NON-PLATE modulated service (such as CW, FM, Class C, Class AB2, etc). It is rated according to Absolute Maximum ratings for the tube.

2. P.84 ICAS service ---- ICAS (Intermittent Commercial and Amateur Service) is rated at 5 minutes key down followed by 5 minutes key up. That handles all but the longwinded AM fellas. CW easily is a small time class that fits entirely within this type service.
3. P.67 Filament supply --- ``The operating voltages applied to thoriated-tungsten or oxide-coated filamentary cathodes should not be permitted to vary more than plus or minus five percent from the values specified in the tube data. Heater voltages for unipotential cathodes should be maintained within plus or minus ten percent of rated values unless smaller tolerances are specified in the data for individual tube types.

Remember this refers to transmitting tubes, and not necessarily receiving tubes. Also, I am interpreting this to mean WHILE the tube is in operation, at full power --- see below. This would not include standby idling periods.

So, -5 percent is entirely adequate for running power tubes at speed.

Now, from the Bible of Tubes, the RCA Electron Tube Handbook HB-3.

#### 1. General Section --- Rating Systems:

- a) There are three tube rating systems --- 1) the Absolute-Maximum Rating System, 2) the Design-Center Rating System, and 3) the Design-Maximum Rating System.

ABSOLUTE-MAXIMUM Rating System --- This system uses values that should not be exceeded under the worst probable conditions. Under this system, filament voltage at FULL LOAD should not deviate from design specs by more than plus/minus five percent unless otherwise specified by the tube manufacturer. Example: Running an 807 at 750 volts requires the filament be kept to 6.3 volts AC plus minus 0.32 volts, or 6.0 volts to 6.6 volts.

This is the oldest rating system, dating from the first production vacuum tubes in the 1920's.

NOTE: Transmitting tubes are rated at ABSOLUTE-MAXIMUM system values.

DESIGN-CENTER Rating System --- This system uses values that should not be exceeded under normal conditions. Under this system, filament voltage

at FULL LOAD should not deviate from design specs by more than plus/minus ten percent of a specified center value. This and the DESIGN-MAXIMUM rating system seem to apply to mainly receiving tubes operating from 117vac lines, which in the US are supposed to be plus/minus 10 percent.

So, in reading this, it still appears that transmitting tubes should be run +/- 5 percent under full power. Receiving tubes, if not run at full absolute ratings can be run anywhere from +/- 10 percent of design ratings.

In the section on cathodes --- HEATER-CATHODES:

``For proper performance of heater-cathode tubes, rated heater voltage should, in general, be applied at the heater terminals. However, when heater-cathode high-vacuum tubes are used in transmitting service and are lightly loaded, the heater voltage may be reduced as much as 5 percent below normal to conserve life. As conditions require, the voltage should be increased gradually to maintain output. Toward the end of life, the gradual increase may be carried above rated heater voltage to obtain additional service.''

and.....

``During standby periods of less than 15 minutes, the heater voltage of high-vacuum tubes should be maintained at normal rated value; for longer periods, the heater power should be turned off.''

This would indicate that things like the 807 and 6146 could be run at 5 percent less than rated filament voltage under light load, at say, half rated power to conserv tube life.

Now on to thoriated tungsten filaments for the larger transmitting tubes and specialty transmitting tubes.

``The operating voltage of a thoriated-tungsten filament should, in general, be held to within +/- 5 percent of its rated value. However, in transmitting applications where the tube is lightly loaded, the filament may be operated on the low side --- as much as 5 percent below normal voltage. As conditions require, the voltage should be increased gradually to maintain output. Toward the end of life, additional service may be obtained by operating the filament above its rated voltage. It should be noted that a tube having a thoriated-tungsten filament should never be operated under emission-limited conditions since this type of operation may overheat the tube and cause permanent loss of emission.''

and.....

During standby periods in transmitting service, thoriated-tungsten filaments may be operated according to the following recommendations to conserve life. For short standbys of less than 15 minutes duration, the filament voltage of all but the largest types should be reduced to 80 percent of normal; for longer periods, the filament power should be turned off. For the largest types, such as the 827-R and 861, it is recommended that the filament voltage be reduced to 80 percent of normal during standby operation up to 2 hours; and that for longer periods, the filament power be turned off.'

And, when the filament life begins to go south, emissionwise, the filament can be re-stoked a bit by ``flashing'' the thoriated-tungsten filament to drive thoria up to the surface of the filament structure.

``The operating life of thoriated-tungsten filaments is ordinarily ended by a decrease in electron emission. Decreased emission, however, may be caused by the accidental application of too high filament, screen or plate voltage. If the over-voltage has not been continued for a long time, the activity of the filament can often be restored by operating the filament at its normal voltage for 10 minutes or longer without plate, screen, or grid voltage. The reactivation process may be accelerated by raising the filament voltage to not higher than 120 percent of normal value for a few minutes. This reactivation schedule is often effective in restoring the emission of thoriated-tungsten filaments in tubes which have failed under normal service. Sometimes a few hundred hours of additional life may be obtained after reactivation.'

So, for big transmitting tubes such as 813's and the like, proper feeding of the filament voltage at rated values of 10 volts down to 9.5 volts can conserve tube life. Standby at 80 percent voltage or 8.0 volts is reasonable for limited times of up to 15 minutes or so. Bobbi Barmore ran her 4CX25000's at lower filament voltages to conserve life, with good service. I run my 813's in the RCA ET-8019A marine transmitter at 9.5 volts to 10 volts, and have had the same set in the rig for some 6-7 years, and they were used pulls when I got them. Folks running 833's in bcst rigs also run them down a hair to conserve them. In my Hartley oscillator service, things like 10's, 11's, and even biggies like 833's can easily be run down at E-5% for lengthy tube life.

Regarding starting tubes up from cold:

Here is a hidden tidbit from the the ancient days that one can apply to all tubes, especially filamentary ones....

#### PURE-TUNGSTEN FILAMENTS:

``Pure tungsten filaments are used in certain tubes especially those for high voltage transmitting service. Since these filaments must operate at a high temperature of about 2500C (a dazzling white) to emit sufficient electrons, a relatively large amount of filament power is required. The operating life of these filaments is determined by the rate of tungsten evaporation. Their failure, therefore, occurs through decreased emission or burn-out.''

``Pure-tungsten filaments give best life performance when they are operated so as to conserve their emitting capability. They are designed with voltage and current ratings in accord with the service expected of the particular tube type. However, in applications where the normal emission at rated voltage is not required, the filament can be operated at a somewhat reduced voltage. The extent of the reduction depends on the peak emission requirements of the application as well as on the percentage regulation of the filament voltage. When these are known, the correct operating filament voltage for any tungsten-filament type can be calculated from its filament-emission characteristic.''

and.....

``It should be noted that a reduction of 5 percent in the filament voltage applied to tubes with pure-tungsten filaments will approximately double their life. A reduction of 15 percent will increase the filament life almost tenfold.''

and.....

``During long or frequent standby periods, pure-tungsten-filament tubes may be operated at decreased filament voltage to conserve life. When the average standby time is an appreciable portion of the average duty cycle and is less than 2 hours, it is recommended that the filament voltage of all but the largest types be reduced to 80 percent of normal; and that for longer periods, the filament power be turned off.''

But, most importantly.....

``For turning on the filament power, a filament starter should be used so as to increase the voltage gradually and to limit the high initial rush of current through the filament. It is important that the filament current never exceed, even momentarily, a value of more than 150 percent of normal, unless the tube data specify otherwise.''

And, probably of greatest importance to tube filaments is the following.....

``Similarly, as an added precaution, the filament power should be turned off gradually to prevent cooling strains in the filament.''

What all of this is telling me is that it does pay to ramp up and ramp down the tube filaments. This last section was written in 1945, according to the tube chart dates in the handbook. I would extend this further to include these considerations for BOTH straight pure-tungsten AND thoriated-tungsten filaments, regarding powering up and powering down. The 80 percent idling standby current seems common all around for directly heated filaments.

Now, on to some additional nuances buried in the RCA Transmitting Tube Operating Considerations section of the HB-3 handbook.

``The rated filament or heater voltage should be applied for the heating time specified in the published data to allow the cathode to reach normal operating temperature before voltages are applied to other electrodes.''

I usually interpret this to mean that the filaments should heat up at least 2 minutes minimum BEFORE cranking up the plate/screen voltages, at all. That is why I always build the power supplies on almost everything I put together using tubes so that the filament and plate circuits can be separately switch on.

Also.....

``The life of the cathode can be conserved by adjusting to the lowest filament or heater supply voltage that will give the desired performance. In general, the filament or heater voltage values given in the published data include the maximum value and the typical value. Exceeding the maximum value will damage or severely shorten the life of the cathode. The filament or heater voltage should be adjusted to the typical value initially, then reduced to provide satisfactory tube performance; any further reduction will show some degradation.''

I would interpret this to mean within the -5 percent rated voltage, but it could also mean that lower voltages may be usable, if properly set up and adjusted thereto.

And considering standby periods.....

``During standby periods, the tube may be operated at decreased filament or heater voltage to conserve life. It is recommended that the filament or heater voltage be reduced to no less than 80 percent of normal during

standby periods of up to 2 hours. For longer periods, the filament or heater voltage should be turned off.'

The dates from these last two sections of information are 1965, from the same handbook.

Hence, in the final analysis, it would appear reasonable to:

1. Turn ON and OFF vacuum tubes, especially filamentary ones, with some care, slowly running them up to voltage, and when done, slowly running them down in voltage to off.
2. Preheat the tube filaments up to the proper temperature before turning the plate/screen voltages on.
3. Run tubes at rated filament voltage to 5 percent less than rated filament voltage at full power.
4. Run tubes at rated filament voltage to some value less than rated filament voltage, as determined by desired tube performance. This value may be 5 percent less than rated filament voltage or even a bit less than that.
5. In standby mode, reduce filament voltage. In filamentary types reduce voltage to 80 percent rated filament voltage. In types with indirectly heated cathodes, reduce voltage to about 90 percent of rated filament voltage.

OK, it works for me, and I have put the money where the ol' kisser was, so to speak, and directly quoted and cited to back me up.

The main point is BE CAREFUL with yer firebottles which gloweth in the dark!

73/Bob/NA4G  
rdkeys@csemail.cropsci.ncsu.edu

```
*****
* 73 TU SU VA DE NA4G          ``Boat Anchor Bob'', an ol' CW fart. *
*****
* Morse has been in the family for over 100 years. *
* Morse radiotelegraphy (Spark/CW) has been in the family since 1914. *
*****
* May you have fair winds and following seas on your watch at the key. *
```

\*\*\*\*\*

From boatanchors@theporch.com Thu Jan 19 20:34:52 1995  
Date: Thu, 19 Jan 1995 18:00:49 -0600  
Message-Id: <950119214920\_71333.144\_DHQ23-1@CompuServe.COM>  
From: don merz <71333.144@compuserve.com>  
Subject: Tubes Wanted

I need some tubes: Metal: 12SJ7 and 12SG7. Glass: 26Z5W, 6082. If you have any that you can sell, drop me a note. Thanks.

From boatanchors@theporch.com Thu Jan 19 10:04:47 1995  
Date: Thu, 19 Jan 1995 07:45:19 -0600  
Message-Id: <Pine.SUN.3.91.950119080658.9692B-100000@access3.digex.net>  
From: Tony Stalls <rstalls@access.digex.net>  
Subject: Warm and Fuzzy

On Thu, 19 Jan 1995, William Hawkins wrote:

> Richard Loken, with the distinctive .sig, asks, "Why am I doing this?"

To which Bill's bottom line was:

> It is also true that boatanchors are from an era where you could  
> understand what was going on electronically.

and...

> So, thank you, boatanchor people, for providing interesting discussions  
> about solvable things (with the possible exception of grounding). You  
> get me through the day. And Richard, I think that's why we do this.

As most of my fellow BA'ers know, I'm not shy about waxing nostalgic at the drop of carrier, so I'll spare you of a complete restatement in the vein of what Bill was talking about. There's another reason too.

Amateur radio is made up of two kinds of folks. The group I wish I were among are all those who are either electronic professionals or are otherwise able to, as one person described it, somehow directly converse with wall outlets. My bunch are folks who spent their careers doing something outside radio or electronics or aren't otherwise formally trained. We're hams because of "radio magic" and how much fun it is.

While it's true that the Japanese toys bring "ooohs" and "ahhhs" with all

those gadgets, memories, and other assorted thinga-ma-jigs, but so does my VCR and microwave oven. So really, what good are they? For example, somebody commented that you can't compete with the big boys in contests any more with boatanchors, so my reaction is to not want to participate any more. Where's the fun when all the skill comes from Intel and the Emperor of Japan?

Perhaps I feel this way to make up for my not being able to pass the time of day with my table lamp. It really doesn't matter as long as I'm still having fun.

73,

Tony  
K4KY0